

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:	Brian J. Brown, Michael L. Davis
Application No.:	09/934178
Filed:	August 21, 2001
For:	Improved Longitudinally Flexible Expandable Stent
Examiner:	Paul Prebilic
Group Art Unit:	3774

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Docket No.: S63.2N-5605-US05

PRE-APPEAL BRIEF REQUEST FOR REVIEW

This is in response to the Final Office Action dated **August 10, 2009**, which rejected claims 17, 20, 29 and 30 under 35 USC § 102 over Pinchasik (US 5449373); rejected claims 17, 20, 29 and 30 under 35 USC § 102 over Palmaz (US 5102417); rejected claims 16, 25, 26 and 28 under 35 USC § 103 over Pinchasik in view of Kleshinski (US 5902317); rejected claims 16, 25, 26 and 28 under 35 USC § 103 over Palmaz in view of Kleshinski; rejected claims 9, 10, 13-15, 21, 22 and 24 under 35 USC § 103 over Israel (US 5733303) in view of Pinchasik and Kleshinski; and rejected claims 18 and 19 under 35 USC § 103 over Palmaz or Pinchasik in view of Lau (US 5514154).

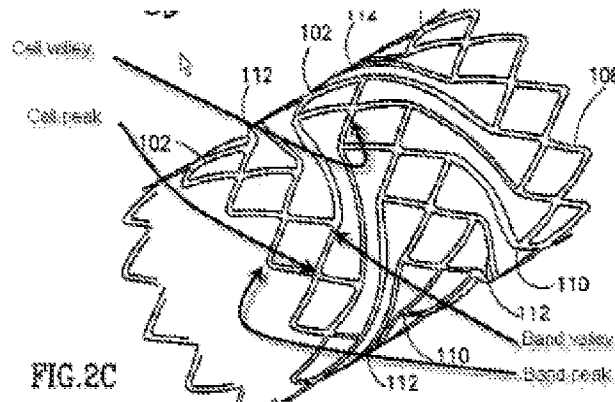
Rejections Applying Pinchasik

The rejections under 35 USC § 102 are traversed because the Pinchasik stent does not disclose or suggest a stent that meets limitations of the rejected independent claims, for example because the Pinchasik stent includes diamond shaped cells that do not meet boundary requirements for cells as recited in the rejected claims. The rejections under 35 USC § 103 that apply Pinchasik as the primary reference are traversed because the stent, when modified as proposed in the rejection, still includes the cells at issue.

Independent claim 17 recites “an expandable framework defining a tubular body having a plurality of cells... each cell of the stent defined by two of the connecting members and

portions of two different serpentine bands.”

The rejection characterizes Pinchasik segments 102 as the claimed “serpentine bands” and the Pinchasik links 112 as the claimed “connecting members.” See Office Action at pages 2-3. The rejection provides the following marked Figure 2C from Pinchasik.



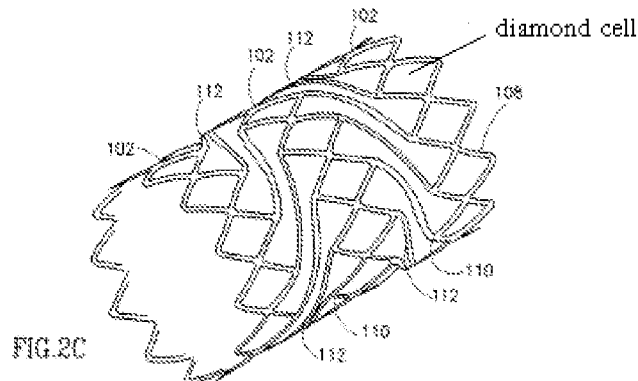
The rejection has labeled cell peaks and valleys and separate band peaks and valleys on the Pinchasik Figure above; however, claim 17 does not recite separate cell peaks and band peaks. The arbitrary labeling does not establish a disclosure of the subject matter of claim 17 in Pinchasik.

Claim 17 recites serpentine bands comprising “alternating peaks and valleys” and “connecting members, each connecting member connected between a peak and a valley.” Thus, the “peaks” and “valleys” recited in claim 17 must be those of the serpentine bands. Claim 17 further recites, with respect to a serpentine band, “the peaks...being offset circumferentially from the valleys.” The marked Pinchasik Figure 2C provided in the rejection, shown above, shows the “band peaks” and “band valleys” as being aligned, and not meeting the limitations of claim 17. Although the “cell peaks” and “cell valleys” as characterized by the Examiner are offset, the rejected claims do not recite cell peaks or cell valleys. Thus, the rejection has not shown offset band peaks and valleys as recited in the claim.

Additionally, claim 17 requires each cell of the stent to be “defined by two of the connecting members and portions of two different serpentine bands.”

Pinchasik does not meet the language of claim 17 because some of the “cells” are not bounded by a link 112. See e.g. annotated Figure 2C of Pinchasik, provided above. Each segment 102 includes cells that are defined entirely by the segment/“band” structure. For

example, see the cell marked “diamond cell” in Figure 2C below.



The rejection argues that the term “cell” has no special definition, and although certain openings in the Pinchasik stent are considered “cells,” the diamond shaped openings in Pinchasik are not “cells” within the meaning of the rejected claims. See Office Action at page 3. This assertion is traversed.

A “cell” is an opening in the stent framework. A person of ordinary skill in the art would consider the diamond shaped openings of Pinchasik to be “cells” as recited in the preamble of claim 17; however, the diamond shaped openings of Pinchasik do not meet the specific requirements of a cell recited in the body of claim 17 – that each cell of the stent be “defined by two of the connecting members and portions of two different serpentine bands.” Therefore, the diamond shaped openings of Pinchasik are “cells,” but Pinchasik does not disclose or suggest a stent that meets each limitation of claim 17.

Therefore, claim 17, and claims 20, 29 and 30 dependent therefrom, are patentable over Pinchasik under 35 USC § 102.

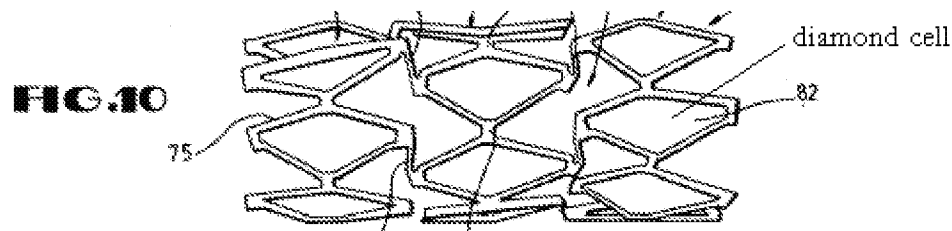
Independent claim 16 similarly recites, “each cell of the stent is bounded at a first end by a portion of one annular element, at a second end by a portion of another annular element, and by two of the connecting members which extend between the one annular element and the other annular element.” The rejection under 35 USC § 103 does not propose to modify the Pinchasik stent in a way that would result in it meeting the limitations of claim 16. Therefore, claim 16 and claims 25, 26 and 28, dependent therefrom, are not obvious under 35 USC § 103 over Pinchasik in view of Kleshinski.

With respect to claims 18 and 19 (rejection under 35 USC § 103 applying Lau),

which depend from claim 17, the rejection does not propose to modify the stent in a way that would meet the limitations of claim 17, and claims 18 and 19 are therefore patentable over Pinchasik in view of Lau under 35 USC § 103.

Rejections Applying Palmaz

The rejections applying Palmaz are similar to the rejections applying Pinchasik, discussed above. The Palmaz stent includes diamond shaped cells that do not meet the limitations of independent claims 16 or 17. See e.g. Palmaz Fig 10 below.



The rejections under 35 USC § 102 are traversed because the Palmaz stent does not disclose or suggest a stent that meets limitations of the rejected independent claims. The rejections under 35 USC § 103 that apply Pinchasik as the primary reference are traversed because the stent, when modified as proposed in the rejection, still includes the diamond shaped cells at issue and does not meet the limitations of the rejected claims.

Rejections Applying Israel

The rejection proposes to modify the Israel stent by offsetting the cells/bands from one another and using circumferentially offset/helical connectors as taught by Pinchasik. See Office Action at page 6 and Pinchasik Figure 2A. Thus, the rejection proposes to utilize the connector configuration from Pinchasik in the Israel stent.

A person of ordinary skill in the art would not have been motivated to use a connector configuration as taught by Pinchasik because Israel specifically teaches away from the use of such helical connectors. Israel discusses the Palmaz patent (US 5102417) in the Background section. Palmaz teaches a stent having helical connectors similar to those of Pinchasik; however, the Palmaz connectors are much shorter than the helical connectors in Pinchasik. See e.g. Palmaz Figure 7.

In discussing Palmaz, Israel warns that “helical connectors twist,” and states that

“The twisting motion is most probably harmful to the blood vessel.” See column 1, lines 35-44. Thus, Israel teaches away from using helical connectors as shown in Palmaz Figure 7, which cause adjacent band segments to twist relative to one another. Israel then teaches a stent wherein the connecting segments extend between longitudinally aligned band portions – a stent design that avoids the “twist” associated with helical connectors. See e.g. Israel Figure 1.

In view of Israel’s teachings with respect to Palmaz, a person of ordinary skill in the art would not be motivated to modify Israel in a way that would result in helical connectors as taught by Palmaz/Pinchasik. The Pinchasik connectors are longer than the Palmaz connectors, and would result in a greater degree of twist. Therefore, a person of ordinary skill in the art would not have modified the Israel stent as proposed in the rejection.

Further, claim 9 recites “the valley portions of the first annular element having the same shape as the peak portions of the first annular element.” If the modification to Israel proposed by the rejection in view of Kleshinski were performed, the resulting device would not meet this limitation. The rejection proposes to modify the Israel stent by modifying an end segment to have “fingers” as taught by Kleshinski. Such a modification would change one end of the end segment, but not the other. The resulting end segment would have “valley portions” of a different shape than the “peak portions” due to the fingers, and the device proposed in the rejection would not meet the limitations of independent claim 9.

In view of the forgoing remarks, Applicants request withdrawal of all rejections asserted in the Final Office Action.

Respectfully submitted,
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